WHAT IS CLAIMED IS:

1. A heat exchanger assembly comprising:

a shell;

a plurality of tubes;

a shell side fluid inlet;

a shell side fluid outlet;

at least one tube side fluid inlet;

at least one tube side fluid outlet; and

at least one isolation and flow direction control plate positioned in the shell of the heat exchanger assembly for creating adjacent smaller heat exchangers, each of said isolation and flow direction control plates including at least one fluid slot for permitting fluid communication between corresponding adjacent smaller heat exchangers.

2. The heat exchanger assembly according to claim 1, wherein each of said isolation and flow direction control plates is a rectangular shaped plate.

3. The heat exchanger assembly according to claim 2, wherein each of said fluid slots is a rectangular shaped fluid slot.

4. The heat exchanger assembly according to claim 1, wherein each of said fluid slots is a rectangular shaped fluid slot.

5. The heat exchanger assembly according to claim 1, wherein said tubes form at least one U-shaped tube bundle.

6. The heat exchanger assembly according to claim 1, said isolation and flow direction control plates having a pressure loss coefficient, said pressure loss coefficients contributing to an acceptable pressure loss for each of said smaller heat exchangers.

7. The heat exchanger assembly according to claim 1, wherein said shell side fluid inlet is arranged in a cross flow fluid path with respect to each of said tube side fluid inlets.

8. A method of controlling a fluid flow for a heat exchanger assembly comprising:

creating a plurality of smaller heat exchangers by providing at least one isolation and flow direction control plate in a shell side of the heat exchanger assembly; and

isolating and directing the fluid flow on the shell side of the heat exchanger assembly between each of said smaller heat exchangers.

9. The method according to claim 8, wherein said heat exchanger assembly is a shell and tube heat exchanger assembly.

10. The method according to claim 8, wherein each of said isolation and flow direction control plates includes at least one fluid slot for permitting the fluid flow to pass through said isolation and flow direction control plate.

11. The method according to claim 10, wherein each slot is a rectangular slot.

12. The method according to claim 8, further comprising:

varying a period of time during which the fluid flow on said shell side of the heat exchanger assembly resides in said smaller heat exchangers.

13. The method according to claim 8, wherein said isolation and flow direction control plates are rectangular plates.

14. The method according to claim 8, further comprising:

calculating a plurality of acceptable pressure losses through each of said smaller heat exchangers; and

sizing said isolation and flow direction control plates to permit fluid flow within said acceptable pressure losses.

15. The method according to claim 8, wherein said shell side of said heat exchanger assembly is arranged in a cross flow fluid flow.

16. An isolation and flow direction control plate for controlling fluid flow on a shell side of a shell and tube heat exchanger comprising:

a base plate; and

at least one fluid slot for permitting a passage of a shell side fluid flow through said isolation and flow direction control plate.